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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/695,492

10/28/2003

David A. Johnson

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01/23/2006

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EXAMINER

PHAM, HAI CHI

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,492

Applicant(s)

JOHNSON, DAVID A.

Examiner

Hai C. Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-9, 11-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namikata (Pub. No. U.S. 2003/0133138) in view of Scheuer (U.S. 6,697,582).

Namikata discloses an image processing method and apparatus comprising a print unit (printer 107) configured to apply a colorant to a test element (generating a color patch or proof for correction) (Fig. 17A), and a calibration system (e.g., color patch colorimetry unit 110) configured to measure one or more colorant levels of the colorant (e.g., density level CMYK) applied to the test element before the colorant is in a finished state, measure one or more color values of the colorant (Lab values) (paragraph [0150]), and establish a correlation between the one or more measured colorant levels and the one or more measured color values such that the correlation can be utilized to calibrate the print unit (paragraph [0240]). With regard to claim 22, Namikata further teaches the provision of a storage medium having a program code of a software program that can implement the aforementioned functions (paragraph [0253]).

Namikata fails to teach the comparison of the predicted color values to target color values, and the calibration of the print unit if a difference between the predicted color values and the target color values exceeds a threshold value (claims 2, 9, 31), and the measurement of one or more color values of the colorant applied to the print media after the colorant is in the finished state (claims 1, 11, 32, 37, 39), wherein the colorant is in the finished state after being fused onto the print media or formed as a permanent image on the print media, which selection being made less frequently.

Scheuer discloses a dynamic control of the tone reproduction curve by generating test patches in association with target test patch densities to be applied to a photoreceptor, measuring the actual colorant or toner densities, approximating the actual tone reproduction curve based on the measured actual colorant or toner densities using a curve fitting technique, comparing the actual tone reproduction curve to a target tone reproduction curve, and if the actual tone reproduction curve is not the same a correction in color value is required and thus the color value is changed with a corrected value (col. 5, line 66 to col. 6, line 10). Scheuer further teaches that the printing system can include level 4 controls based on the measurements of the colorants made on a finished state image or a permanent image onto the print media (e.g., an image rendered on a print medium such as paper) and target measurements associated therewith (col. 17, lines 39-44), and thus indicates that such calibration performed on the image rendered on the print medium is selected less frequently than that being performed with the colorant deposited on the photoreceptor. Scheuer also teaches the

control procedure being performed by the implementation of a hardware and software configuration.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to update the calibration value in the device of Namikata every time the measured colorant or toner densities do not match the target colorant or toner densities as taught by Scheuer. The motivation for doing so would have been to optimize the system performance as suggested by Scheuer.

3. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namikata in view of Scheuer, as applied to claims 1, 9 above, and further in view of Denton et al. (U.S. 6,628,426).

Namikata, as modified by Scheuer, discloses all the basic limitations of the claimed invention except for the test element being a print media transport belt.

Denton et al. discloses a printing system comprising a print unit (e.g., print head 12) configured to apply a colorant to a test element (producing a toner test patch 66 on the intermediate belt 36), and a calibration system (sensor arrangement 56 including a light source 58 and a light detector 60) configured to measure one or more colorant levels of the colorant (e.g., density level) applied to the test element before the colorant is in a finished state (the toner test patch on the intermediate belt being sensed before the toner test patch is being transferred onto the print medium or paper and fused), convert the one or more measured colorant levels to corresponding one or more predicted color values based on a correlation between colorant levels and color values

(the reflection signal sensed by the light detector 60 is converted into a predicted L* value or lightness value that one would expect to obtain if the toner test patch is transferred to paper and fused) (col. 4, lines 1-16). Denton et al. further teaches the test element being a print media transport belt (intermediate belt 36).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the printing unit of Namikata with a transport belt on which a color patch is generated as taught by Denton et al. since Denton et al. teaches this to be old and well known in the printing art to include a transport belt for carrying the recording medium pass the printing station.

Response to Arguments

4. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new grounds of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM
PRIMARY EXAMINER

January 21, 2006